The Effects of Familiarity on Oral Decoding Accuracy in an Oral Reading Task

A Thesis submitted
to the Graduate School
Valdosta State University

in partial fulfillment of requirements
for the degree of

MASTER OF EDUCATION

in Communication Sciences and Disorders

in the Department of Communication Sciences and Disorders
of the Dewar College of Education and Human Services

May 2015

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B.A., Kean University, 2012

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ABSTRACT

The primary purpose of this study was to examine the relationship between the familiarity of the second reader on oral decoding accuracy in a choral reading task. Nine passages were obtained (three from each reading grade level: 4, 5, and 6). Three reading tasks were completed by each participant at their respective grade level. One task included reading aloud along with the audio-recording of an unfamiliar female voice. One task involved the participant reading along with an audio-recording of their mother and one task consisted of the participant reading aloud by themselves. Word reading accuracy and word reading rate data were collected. Results indicated that the participants read at a slower rate and less accurately when they read alone as compared to when they read along with their parents. This was interpreted as evidence supporting the importance of reading along with familiar individuals as compared to reading alone or along with unfamiliar voices.

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ACKNOWLEDGEMENTS

I would like to express the deepest gratitude towards the committee chair, Dr. Matthew Carter, without whom this would not have been possible. His continued work, excitement, and guidance made this a peaceful yet rewarding journey.

I would like to thank my committee members, Dr. Lynn Adams, and Dr. Gina Doepker whose passion for reading, language, and fluency was apparent throughout. Having you be the mediators made the research and thesis more concrete.

In addition, I would like to thank Diana Minafo and Erica Stockwell, the twins who sparked the idea for this entire project. Unknowingly, this thesis would not have come about without them.

Finally, I would like to thank my family, especially my parents Otto and Jo-Ann Valle, and my fiancé Hugo Castillo. Without their love, support, and motivational words I would not have had the determination to keep going. My family has always been my source of encouragement and inspiration, which was heightened throughout my stay in Georgia and during this writing process. Your support means the world to me, thank you.

Chapter I

INTRODUCTION

According to Torgesen and Hudson (2006), reading fluency is comprised of three component skills, or fluency indicators: (1) accuracy of word decoding, (2) automaticity of word recognition, and (3) prosody of oral text reading. According to Catts and Kamhi (1999), decoding refers to word recognition processes that transform print into words. Accuracy of decoding refers to the ability to correctly generate a phonological representation of each word, either because it is part of the reader's sight-word vocabulary or by the use of a more effortful decoding strategy, such as segmenting the word. Skills required for accuracy of decoding include: alphabetic principles, the ability to blend sounds, the ability to use cues to identify words in text, and the ability to utilize a large sight-word vocabulary of high-frequency words. Decoding is an essential aspect of learning to read. Accurate decoding is a requirement for building the next component of reading fluency: automaticity. Automaticity is achieved when the reader is able to read words in text with little to no cognitive effort, thus freeing more cognitive resources for comprehension. Prosody of oral text reading involves the capability to read with the appropriate phrasing and expression.

Providing children with a literacy-rich environment is an important factor related to overall reading development and the attainment of automaticity. Although providing this environment certainly does not ensure automaticity of reading abilities, it does increase the likelihood of reaching such a goal. Providing children with the opportunity to

engage in literacy (or pre-literacy) tasks can improve the requisite abilities required to read at higher levels while simultaneously encouraging an appreciation for reading that can last a lifetime. However, many children do not frequently find themselves in these literacy rich environments for a myriad of reasons. The parents might be rendered incapable of providing this environment themselves either due to time constraints or due to a lack of reading ability themselves. In both of these cases, a tempting potential solution is to have the child read along with audio stories such as those that are readily available on computers, tablets, smartphones, and other technological modalities. However, no empirical evidence has been provided which quantifies the benefit of engaging in such reading activities relative to reading alone or reading along with more familiar individuals (such as caregivers). The purpose of this study was to compare the reading fluency of children when reading alone, with their caregivers, and with an unknown individual.

Chapter II

LITERATURE REVIEW

Normal Reading Processes

According to Catts and Kamhi (2005) reading is a complex cognitive activity. Gough and Tumner (1986) propose what they call a "Simple View of Reading." The main focus of this view is that reading consists of two components, decoding and linguistic comprehension. Decoding refers to word recognition processes that transform print into words. Linguistic comprehension or listening comprehension is defined as the process by which words, sentences, and discourses are interpreted (Gough & Tunmer, 1986). Included in this reading model is the higher level thinking process. According to this view of reading, decoding in the absence of comprehension is not reading.

Catts and Kamhi (2005) discuss that the models of spoken and written language comprehension have often been divided into three general classes: bottom-up, top-down, and interactive. Bottom-up models are defined as a step-by-step process that begins with the initial detection of an auditory or visual stimulus. When reading isolated, decontextualized words, the bottom-up process is necessary. The top-down process alternatively emphasizes the importance of scripts, schemata, and inferences that allow one to make hypotheses and predictions about the information being processed. This process facilitates word recognition and discourse-level comprehension.

Perceptual Analysis

Catts and Kamhi (2005) define perceptual analysis by discussing the sensory mechanisms involved in the detection of speech and print; the ear is used to detect speech and the eye is used to detect print. Detection represents the lowest level ability that is necessary for reading to occur (Catts & Kamhi, 2005). Discrimination is the ability to see visual differences between different visual configurations whereas identification is the actual coupling of the orthographic symbol along with the relevant information stored by the individual pertaining to that specific letter. Discrimination and identification, as they are described here, apply best to inexperienced readers. For the experienced reader, this process will be accomplished on larger units than single letters, such as syllables, words or even phrases.

Word Recognition

In the word recognition stage reading and spoken language begin to share similar knowledge domains and processes (Catts & Kamhi, 2005). Before this stage, the processing of print and speech has involved different sensory and perceptual systems (Catts & Kamhi, 2005). The word recognition stage is highly reliant on perceptual analysis. If there is a disturbance in detecting, analyzing, discriminating, or identifying the letter (or group of letters), then errors will be present at the word recognition stage. The end point of this stage is the mental lexicon. The print must activate a stored concept in the individual's lexicon in order for word recognition to occur.

According to dual route theories of decoding in reading, the concepts that are stored in the mental lexicon can be accessed or decoded in one of two ways (Coltheart, Curtis, Atkins, & Haller, 1993). Coltheart et al. state that print may be decoded either by

its phonological representation or by its visual representation. Accessing the lexicon via the word's phonological representation is an indirect method that requires much attention and energy to be devoted to recoding the letters that were perceived in the perceptual stage into the corresponding phonemes. These phonemes must be blended into sequences then matched with stored concepts in the mental lexicon. This method relies on the individual's knowledge of the language sound system and their ability to manipulate and segment individual sounds or clusters of sounds into whole words. At a more basic level, this method relies on the individual's awareness that words consist of discrete phonemic segments. This may be simply stated as "segmenting" the words. This method has been shown to be inefficient in regards to comprehension (Breznitz & Berman, 2003). However, the mastery of this method is a crucial building block for the development of fluent reading via the direct visual approach. This is in contrast to speech in which there is only one way to access a word's meaning (Catts & Kamhi, 2005).

The lexical route, as previously stated, is much more efficient and rapid as a result of the direct and holistic process of reading words and text. Catts and Kamhi (2005) explain that the process of lexical decoding is accomplished by locating "the word in the lexicon whose visual representation contains the same segmental and/or visual features as those identified in the previous perceptual analysis stage. Therefore, a match is made between the perceived visual configuration and the visual representation that is part of the mental lexicon for the particular word" (p. 9). The mastery of the phonological route allows the reader to learn the sound/symbol correspondence that will eventually lead to the automaticity of the lexical route. As a result of this acquired automaticity, more energy and attention can be allotted for comprehension, which will increase

comprehension skills. Using the lexical route as the primary decoding strategy, a reader is believed to be an automatic or fluent reader (Penny, 2000). However, the two decoding strategies in the dual-route system are not believed to operate exclusive of each other during a reading task. The phonological decoding strategy is believed to be used for decoding unfamiliar words while the lexical decoding strategy is believed to be used for decoding familiar words (Coltheart et al., 1993). Together, these two strategies encompass what it means to decode. Assuming normal developmental processes occur, proficient readers will become able to access the word and its meaning with little effort almost simultaneously. For normal development to occur, this model suggests that extensive exposure to print presented simultaneously with their phonological representations must occur (Ramus, 2004).

Reading is frequently thought of as a hierarchy of skill, starting at processing individual letters and their associated sounds, and building up to word recognition to text-processing competencies. Skilled comprehension requires fluid articulation of all these processes, beginning with the segmenting and recognition of individual words to the understanding of sentences in paragraphs as part of much longer texts. There is instruction at all of these levels that can be carried out so as to increase student understanding of what is being read.

Reading words, entails being aware of the letters and the sounds represented by letters, having the ability to segment and blend sounds, and eventually produce words (Nicholson, 1991). Once pronounced, the reader notices whether the word as recognized makes sense in the sentence and the context in which it is being read and, if it does not,

takes another look at the word to check if it might have been misread (Gough & Tunmer, 1986).

Tan and Nicholson (1997) conducted a study which emphasized the importance of word-recognition instruction for the improvement of fluency. In their study, struggling primary-level readers were taught 10 new words, with instruction either emphasizing word recognition to the point of fluency (they practiced reading the individual words until they could recognize them automatically) or understanding of the words (instruction involving mostly student-teacher discussions about word meanings). Following the instruction, the students read a passage containing the words and answered comprehension questions about it. The students who had learned to recognize the words to the point of automaticity answered more comprehension questions than did students who experienced instruction emphasizing individual word meanings (Tan and Nicholson, 1997). Breznitz (1997a, 1997b) found similar analyses supporting Tan and Nicholson's outcome. Specifically, she found that development of fluent word-recognition skills can make an important difference in students' understanding of what they read. Word-recognition skills must be developed to the point of fluency in order to maximize comprehension benefits.

Evidence suggests that supplemental reading instruction with repeated readings as a core component can result in improvement in both students' generalized reading fluency and comprehension (Rose, 1984; Weinstein & Cooke 1992). A supporting study was conducted by Eldredge (1996) which compared the effectiveness of two oral reading techniques; round-robin (the children take turns reading aloud) and the shared reading experience (a teacher supported reading activity where teachers and children read

together orally). The study observed the effectiveness of reading growth across time using the two different techniques. The results indicated that the children who received the shared reading experience in the classroom outperformed those in round robin group in relation to vocabulary acquisition, word analysis, word recognition, reading fluency, and reading comprehension. All in all, when children have a model who reads with fluidity, connectivity and expressivity, they improve their reading fluency, comprehension, word acquisition, and reduce their errors.

The National Assessment of Educational Progress (NAEP) conducted a large study of the status of fluency achievement in American education (Pinnell et al., 1994). A representative sample of 1,136 fourth-grade students who participated in the study were initially asked to read aloud a brief passage from a *Highlights* magazine. Following the introductory session, students silently read a complete narrative passage titled *The Hungry Spider and the Turtle,* which they had read during the main NAEP assessment. Students answered three comprehension questions about the passage orally and then read a portion of the passage aloud. Students were instructed to read the story as if they were reading to someone who had never heard it before. The oral reading was audio-taped and later analyzed for overall fluency (White, 1995). This study examined the role of accuracy and rate on reading fluency and reading proficiency. Accuracy was defined in terms of the number of misread words (omitted, inserted, or substituted), and rate in terms of words per minute. Students who read more fluently, read the passage considerably faster (126 to 162 words per minute) than those who read less fluently (65 to 89 words per minute). The more fluent readers were, on average, more accurate than less fluent readers (White, 1995).

According to Breznitz (2003), dysfluent reading is an outcome of difficulties in the phonological and/or orthographic word recognition systems. Through slowed mapping of verbal labels to visual stimuli, deficits may arise from phonological, visuo-spatial, and or working memory processes. Recognition of single words depends on storage and the speed of word retrieval. Inaccurate word decoding leads to the storage of incorrect patterns in the mental lexicon. Many poor readers suffer from word recognition problems that make fluency problematic (Torgesen & Hudson, 2006). LaBerge and Samuels (1974) state that fluent reading is only attained when all decoding levels, from visual to semantic, work automatically, so that attention is free to produce meaning. One of the reasons for mounting interest in the word recognition process is the consistent finding that word recognition development is involved in improving comprehension. Without fluency, it is possible that comprehension abilities will not reach their potential.

Word Reading's Role in Reading Fluency

Accurate decoding is a requirement for building the next component of reading fluency: automaticity. Automaticity of word recognition refers to the ability to quickly recognize words automatically, with little cognitive effort or attention. Automaticity is gained through practice to the point where previously effortful tasks, consequently word decoding, become fast and effortless. This liberates cognitive resources for other tasks, such as text comprehension. Automaticity requires quick and accurate identification of individual words as well as speed and fluidity in reading connected text (Torgesen & Hudson, 2006). Automaticity is a requirement for building the next component of reading fluency, which is prosody. The automatic decoding of words also frees up attentional resources required for prosody. Prosody of oral text reading refers to naturalness of

reading, or the ability to read with proper phrasing and expression, filling text with suitable volume, stress, pitch and intonation. Prosody is an indicator that the reader is actively constructing the meaning of a passage as they read (2006). Prosody may both serve as an indicator that a student is comprehending as they read and also aids in comprehension (Rasinski, 2004).

Fluency Enhancement

In contrast to the fluid rapid reading that typically developed readers display, dysfluent readers may make many errors, read slowly and laboriously as they employ strategies to identify words, and lack expression, sounding monotone and unnatural. Fluency is an essential part of reading, and the National Reading Panel (NRP) (2000) has reviewed its theoretical and practical implications for reading development. In addition, the panel has conducted two research syntheses, one on guided oral reading procedures such as repeated reading and the other on the effect of procedures that encourage students to read more. These two procedures have been widely recommended as appropriate and valuable avenues for increasing fluency and overall reading achievement.

Choral reading, a well-documented fluency enhancer (Bennett, 2006; Bloodstein & Ratner, 2008; Ham, 1986; Manning, 2000), is also "sometimes used in stuttering therapy" (Nicolosi, Harryman, & Kresheck, 1996). Conture (2001) states that "choral reading can be used to show that: (1) speech dysfluencies are malleable, an unfixed, ever-changing property and (2) that speech fluency, given certain circumstances, is attainable" (p. 293). It has been reported (Moats, Louisa, & Hall, 2013) that choral reading also helps build self-confidence and motivation. Repeated oral reading is a well-documented method of increasing reading fluency (Manning, 2000; National Reading Panel, 2000).

The National Reading Panel found that the procedures used in their study tended to improve word recognition, fluency (speed and accuracy of oral reading), and comprehension with most groups (National Reading Panel, 2000).

Parents and teachers are typically the individuals who read along with children. Reading books with your child can provide experiences and vocabulary that he or she may not be exposed to on a daily basis. Experience and exposure to reading allows children to gain understanding. When a child understands vocabulary and situations, he or she has the foundation to use these words in verbal language. There are also many potential benefits to audio books as well as reading with a familiar person, such as the mother or father. According to readingrockets.org, the following are benefits of audio reading; introduction to new genres that students might not otherwise consider, introduction to new vocabulary or difficult proper nouns, sidestep unfamiliar dialects or accents such as; Old English and old-fashioned literary styles, provide a read-aloud model, provide a bridge to important topics of discussion for parents and children who can listen together while commuting to sporting events, music lessons, or on vacations, and to recapture the enthusiasm when hearing stories beautifully told by these amazingly talented storytellers (Moats & Hall, 2013). At just a few months of age, an infant can look at pictures, listen to the reader's voice, and point to objects on pages. The ability for children to listen to others, familiar or unfamiliar, while they imitate and read along with parents or caregivers is valuable. However, it has not been investigated whether children benefit equally when reading along with familiar individuals as compared to reading along with unfamiliar voices such as would be expected to exist on audiobooks.

Rationale

The primary purpose of this study was to examine the relationship between the familiarity of the second reader in a choral reading task on oral decoding accuracy and reading rate. The potential results of this study have implications regarding the benefits of children reading aloud with their parent/guardians as opposed to reading along with an iPad or taped stories. Research is needed to address the question of the relationship between guided oral reading instruction and the development of fluency. The following experimental questions will be addressed in this study: (1) what are the effects of familiarity on the oral decoding accuracy of children in a choral reading task and (2) what are the effects of familiarity on the reading rates of children in a choral reading task? It is hypothesized that a positive relationship will exist between familiarity and reading accuracy.

Chapter III

METHODS

All procedures were approved by the Valdosta State University Institutional Review Board (see Appendix A). No procedures were altered from their approved state.

Participants

The participants were recruited from the Sullivan Literacy Center and the Speech and Hearing Clinic at Valdosta State University, in Valdosta, Georgia. There were three participants, ages 8, 9, and 10, two females and one male; along with their caregiver. The participants had no history of brain trauma or other underlying factors. Each participant was assigned three passages to read. The caregiver was assigned one passage to read.

Stimuli

Nine passages were retrieved (three from each reading level, 4, 5, and 6) from the Sullivan Literacy Center at Valdosta State University. Passages were retrieved from the following books: *All the Way Under* written by Jyotsna Sreenivasan, *Flat Stanley's Worldwide Adventures 2* written by Sara Pennypacker*, A Growing Dilemma* written by Kate Boehm Jerome*, Rock Solid Clues* written by Kate Boehm Jerome, and *Lights! Camera! Action!* written by Sara Wooten (see Appendix D for selected texts). A female individual who was unfamiliar to all participants and who had been determined to speak with a standard American English dialect was audio-recorded reading one passage from each grade level. When selecting the passages, the author considered syllables per sentence and syllables per 100 words. The passages were entered into the Fry readability

graph (Fry, 1977), which assigns an approximate grade reading level to a passage of text. According to The National Partnership, the grade reading level is found by plotting the average number of sentences and syllables on the Fry Readability Graph retrieved from The National Partnership (2013). The graph measures reading levels from 1st grade to college years.

Instrumentation

The audio-recordings for this experiment were obtained using the voice recorder on an iPad 1st generation, with the audio set to the maximum volume. Each speech sample was recorded and played back using an iPad. The audio was played back at the maximum volume of the iPad.

Administration

Pre-experimental Testing. All participants completed a hearing screening administered at 20 dB at the following frequencies: 1,000, 2,000, and 4,000 Hz (ASHA, 1997). After passing the hearing screening, each child was administered the *Test of Word Reading Efficiency* (TOWRE) (Torgesen, Wagner, & Rashotte, 1999). The TOWRE was administered in order to provide a brief assessment of overall word reading accuracy and fluency. The TOWRE is a nationally normed assessment tool which has two subtests. The *Sight Word Efficiency* subtest assesses an individual's ability to rapidly decode real words and the *Phonemic Decoding Efficiency* subtest assesses an individual's ability to rapidly decode nonsense words (which assesses phonetic decoding abilities). The TOWRE provides standard scores (average 85-115) according to age based norms. Individual results can be found in Table 1. In addition, each participant was administered the *Comprehensive Evaluation of Language Fundamentals – 4th Edition Screening Test*

(CELF-S) (Semel, Wiig, & Secord, 2004). This screening tool is designed as a screening measure for overall language abilities.

Experimental Testing. Both the pre-experimental and experimental data were collected in individual 45 minute sessions. The accompanying parents were informed that they would be given a passage to read and audio-record. Each parent was given ample time to read their passage in a quiet room, with no other individuals present in order to familiarize themselves with the text. Once the passages were mastered, the parents were asked to read aloud their passage while being recorded. The children participants were not located in the same room as the parent during this recording. After obtaining this recording, the participants were asked to read aloud three passages: one on their own, one along with the recording of their caregiver, and one along with the recording of the unfamiliar individual. The child had not encountered the text at any time earlier during the data collection session. The presentation order for the three tasks was counterbalanced across participants. Data was collected on the accuracy of word reading and the rate at which each individual read (words per second).

Data Analysis

Accuracy proportions were calculated for each individual and transformed using the following transformation: 2*arcsine [v (accuracy % / 100)] in order to stabilize variance (Winer, 1971). A one-way ANOVA was conducted on these data to investigate mean differences in transformed accuracy proportions as a function of second reader familiarity. In addition, paired sample *t* tests were administered on the reading rate data in order to investigate mean differences in reading rate as a function of reader familiarity.

Table 1

Means and Standard Deviations (SD) of Participant Age and the Test of Word Reading Efficiency (TOWRE) and Peabody Picture Vocabulary Test-IV

Measure	*M (SD)*
Age	9 years, 4 months
TOWRE Phonemic Decoding Efficiency	73.33 (52.54)
TOWRE Sight Word Decoding Efficiency	80.67 (34.95)

Chapter IV

RESULTS

Decoding Accuracy

The one-way ANOVA which was conducted on the transformed word reading accuracy data revealed no significant main effect of familiarity (see Table 2.) for further details. However, a difference in word reading accuracy of 2% could be considered clinically significant when one compares the familiar reading condition to the isolated reading condition.

In addition, the series of paired sample *t* tests which were conducted on the reading rate data revealed no statistically significant difference as a function of second reader familiarity. Although the results indicate no statistical difference, what could be considered a noteworthy clinical difference was observed in rate enhancement when reading along with the familiar individual. When the participants were reading alone, their rate near a full word per second slower (52.2 words per minute slower) than when reading along with the familiar individual.

Taken together, these data represent two-thirds of the standard definition of reading fluency (rate + accuracy). No measures of prosody were obtained in the current study, and many empirical measures of reading fluency do not factor in prosody either. Although not statistically significant, these data perhaps represent a clinically significant difference in reading fluency abilities. When the participants were reading alone, their rate was slower (2.3 words per second) and they were reading less accurately (91.67%)

than when reading with the caregiver (3.17 words per second and 93.53% accuracy). These differences will be examined in greater depth in the following sections.

Table 2

Means and Standard Deviations (SD) of Word Reading Accuracy and Reading Rate as a Function of Reading Condition

Reading Condition	*Mean Word Reading Accuracy*	*Mean Reading Rate (words per second)*
Solo	91.67 (4.04)	2.3 (.70)
Familiar	93.53 (2.20)	3.17 (1.27)
Unfamiliar	92.63 (1.18)	2.77 (1.06)

Chapter V

DISCUSSION

Word Reading Accuracy

Examining the relationship between the familiarity of the second reader on oral decoding accuracy in a choral reading task was the primary purpose of this study. The current study found that the delivery methods of choral speech did not statistically impact the reading rate or accuracy of the children in this study although clinically there were important differences in terms of reading rate and accuracy which could have ramifications regarding instruction and treatment. Measuring the accuracy of choral reading with a familiar person had not yet been investigated. Reading fluency is composed of both reading accuracy and reading rate, and this study demonstrated that the reading model that is present can have an effect on both aspects of reading fluency. This is a crucial finding, considering the importance that our educational systems have placed upon improving reading fluency due to the overwhelming evidence which supports its critical role in reading comprehension (Breznitz, 2006). Although comprehension was not measured in the current study, research has indicated that faster, more accurate reading is equated with greater levels of comprehension due to the increased availability of cognitive resources associated with the automatic nature of fluent word reading. The findings in this study suggest that children's word recognition proportions increased nearly 2% when reading with a familiar individual as opposed to reading by themselves. The results also indicate an increase of 1% accuracy when reading with a parent versus a

stranger. To see these numbers (1% and 2%) and claim that they are small and insignificant is to not acknowledge the significance of word reading for children of this age. Although reading comprehension was not assessed in this current study, this study was conducted nonetheless with the principle in mind that deficits in word recognition frequently lead to deficits in comprehension (Catts & Kamhi, 2005). Therefore, it is of vital importance for clinicians and researchers alike to accurately understand word reading ability in order to implement appropriate intervention strategies (Carter, Walker, & O'Brien, 2014). It has been hypothesized that decoding errors are "catastrophic" to comprehension, especially when reading short passages such as those children often encounter (Keenan, Betjemann, & Olson, 2008, p. 297). In short passages, there are few other words that might aid a child in determining the correct pronunciation of a difficult word whereas in longer passages, there is much more context and more of a story arc that might offer a reader clues as to not only the correct decoding of a word, but also the meaning of that word. Even a 1% increase in decoding errors can result in far greater reductions in comprehension.

Furthermore, the results of this study indicate that superior benefits might result when a child reads aloud with their parent/guardian as opposed to reading alone or along with an iPad or audiorecorded stories. The results revealed that there is a greater benefit for a caregiver, such as the mother, to read along with their child perhaps because of the relatively superior models of fluent reading they provided compared to the unfamiliar voice. Children use iPads and computers more so than any generation before them, and these results indicate that the improper reliance upon them will most likely not result in optimal reading fluency gains. However, concerning children who are dysfluent readers,

choral reading could be a beneficial task for them to do with their caregivers. These results indicate that the most benefit in terms of accuracy most likely would not occur for the emergent readers while reading aloud with an electronic device such as a LeapPad or iPad. This study provides evidence that they might benefit greater from the reinforcement of a familiar voice. In addition, the parental model is capable of elaborating, adapting, explaining, illustrating, and relating whereas the electronic model is not. When discussing emerging readers in third and fourth grade we should pay close attention to the exposure of children to real and familiar voices. Tan and Nicholson (1997) and Breznitz (1997a, 1997b) both found that the development of fluent word-recognition skills can have an important difference on students' understanding of what they read. Educators who want to improve students' comprehension skills should first focus upon improving word recognition skills. Plain instruction in segmenting words helps many children recognize words more accurately (Snow, Burns, & Griffin, 1998). Word-recognition skills must be developed to the point of fluency in order to maximize comprehension benefits.

Reading Rate

Although the current results revealed that children read most accurately when reading along with a caregiver provided model, they also hint that our caregivers are providing superior models in terms of reading rate. As previously mentioned, when the participants were reading alone, their mean reading rate was slower (2.3 words per second) than when reading with the caregiver (3.17 words per second). These differences on the surface may once again seem small and insignificant as the statistical analysis revealed, however, if they are examined in greater depth, interesting findings can be

gleaned from these results. This "small" mean difference of 0.87 words per second might seem inconsequential, unless one is to compare it to the previously established oral reading rate norms developed by Hasbruck and Tindal (2006). Hasbruck and Tindal obtained norms based upon words per minute as opposed to words per second, so initially a transformation of these data must be obtained simply by multiplying the currently reported words/second by 60. The transformed data then becomes 138 words per minute in the solo condition and 190.2 words per minute when reading with the familiar individual. These numbers on the surface represent a far greater difference. However, numbers "seeming" to be different does not actually equate with a clinical difference. Initially, the change in reading rates for each individual was compared to the standard deviation that was reported for their respective age group. Participants 1 and 3 both exhibited differences (Familiar – Solo) that exceeded the reported value for the standard deviation of the normative data whereas participant 2 did not exhibit such a difference. Therefore, an argument can be made that this does in fact represent a significant difference between these two reading rates for those two participants. However, the certainty by which this data can be extrapolated toward other similar students remains limited. In order to provide more evidence that these numbers do in fact represent a potential difference that is worthy of exploring further in future studies, these numbers were compared to the percentiles that were supplied by Hasbruck and Tindal. The authors only supplied percentile ranges from 10-90%. Each participant was reading between the 75th and 90th percentile when reading alone. However, when reading with their caregiver, each participant was observed to read above the 90th percentile for their age group. So regardless of one's measure of significance, this evidence indicates that

the children did in fact read faster when provided with the model provided by their parent. This finding has important clinical ramifications for parents of children with emerging literacy.

Reading Fluency

Although no statistically significant findings were revealed, the results of this study demonstrate that reading along with a familiar voice has a positive impact on both reading accuracy and reading rate. Children exhibited more fluent reading when they were provided with a parental model of reading when compared to reading alone or when accompanied by an unfamiliar voice. This finding has tremendous clinical applications. Reading fluency is viewed as a combination of reading accuracy, reading rate, and prosody. Reading fluency is viewed as a key determinant in overall reading competence (Fuchs, Fuchs, Hosp, & Jenkins, 2001). Fluent reading allows for the more efficient cognitive allocation of resources, such as attention, to be devoted toward comprehension which is generally the end-goal of reading tasks. Although this study was not designed in order to assess comprehension, these results indicate that theoretically, the best comprehension should have resulted when reading along with the parent. Therefore, future studies should include accompanying measures of comprehension in order to establish optimal reading rates for the participants in terms of comprehension.

Limitations

Limitations for this study included the limited number of participants. Future research should be completed including a larger sample size of participants. Future studies also should examine whether or not the length of the passage was a factor. For example, once the passage is a certain length, does one acclimate to the voice being

played during the choral task? All of these aspects should be investigated in future studies.

Recommendations

More research should be completed with children in order to further elaborate upon the findings of this study. According to this research and previous research, it is recommended that children read with familiar voices when possible. Voices on tape are a helpful tool when no other familiar voice is around, but familiar voices, such as a mother's recording are positive influences on reading fluency. Using familiar voices in classrooms of third and fourth graders who are at the emergent literacy stage should be implemented in schools.

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APPENDIX A

Institutional Review Board Approval Form

Institutional Review Board (IRB)
for the Protection of Human Research Participants

REPORT ON EXPEDITED REVIEW OF PROTOCOL CONTINUATION

PROTOCOL NUMBER: IRB-02983-2013 **RESPONSIBLE RESEARCHER:** Matthew Carter

PROJECT TITLE: Effects of Reader Familiarity on Reading Accuracy in Guided Oral Reading Tasks

APPROVAL DATE: 11/7/13 **EXPIRATION DATE:** 11/6/13

CONSENT REQUIREMENTS:

- ☒ Adult Participants – Written informed consent with documentation (signature)
- ☐ Adult Participants – Written informed consent with waiver of documentation (signature)
- ☐ Adult Participants – Verbal informed consent
- ☐ Adult Participants – Waiver of informed consent
- ☒ Minor Participants – Written parent/guardian permission with documentation (signature)
- ☐ Minor Participants – Written parent/guardian permission with waiver of documentation (signature)
- ☐ Minor Participants – Verbal parent/guardian permission
- ☐ Minor Participants – Waiver of parent/guardian permission
- ☐ Minor Participants – Written assent with documentation (signature)
- ☐ Minor Participants – Written assent with waiver of documentation (signature)
- ☐ Minor Participants – Verbal assent
- ☐ Minor Participants – Waiver of assent
- ☐ Waiver of some elements of consent/permission/assent

IRB CHAIR/VICE-CHAIR DETERMINATION *(check one)*:

- ☐ This research protocol is **approved** for twelve (or) months as presented
- ☒ This research protocol is **approved** for twelve (or) months **contingent** on the following **minor** clarification(s)/correction(s)/changes **to be accepted by the IRB Administrator:**

COMMENTS: For #17, it is suggested to change the language/protocol from: "Miss. Vale will read the assent for to the child and ask if they are willing to participate." to: "Miss. Vale will read a description of the project (or other similar language that does not suggest informed consent) to the child and ask if they are willing to participate." This gauges the interest/willingness of the child but leaves the assent and giving or withholding of parental permission to participate with the parents.

APPROVAL: This research protocol is **approved** as presented. If applicable, your approved consent form(s), bearing the IRB approval stamp and protocol expiration date, will be mailed to you via campus mail or U.S. Postal Service unless you have made other arrangements with the IRB Administrator. Please use the stamped consent document(s) as your copy master(s). Once you duplicate the consent form(s), you may begin participant recruitment. **Please see Attachment 1 for additional important information for researchers.**

Kate Warner, Ph.D. Vice-Chair October 7, 2013

Kate Warner, Ph. D. Vice-Chair Date

Thank you for submitting an IRB application.

Please direct questions to irb@valdosta.edu or 229-259-5045.

Revised: 12.13.12

APPENDIX B

Parental Permission Form

VALDOSTA STATE UNIVERSITY

Parent/Guardian Permission for Child's/Ward's Participation in Research

You are being asked to allow your child (or ward) to participate in a research project entitled "The effects of reader familiarity on reading accuracy in a guided oral reading task". This research project is being conducted by Alexsandria Valle, a student and Dr. Matt Carter, a faculty member in the department of Communication Sciences and Disorders at Valdosta State University. The researcher has explained to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks to your child (or ward). You may ask the researcher any questions you have to help you understand this study and your child's (or ward's) possible participation in it. A basic explanation of the research is given below. From this point on in this form, the term "child" is used for either a child or a ward. Please read the remainder of this form carefully and ask the researcher any questions you may have. The University asks that you give your signed permission if you will allow your child to participate in this research project.

Purpose of the Research: This study involves research. The purpose of the study is to see if your child reads better when they are reading along with you or when they are reading along with a stranger.

Procedures: If you decide to allow your child to participate, your child will initially complete a hearing screening. If they pass this screening, they will be administered the *Test of Word Reading Efficiency-2nd Edition*. This test is designed to assess single word decoding (word reading) accuracy and fluency. Your child will also be asked to complete the *Clinical Evaluation of Language Fundamentals – 4th Edition Screening Test* which is designed as a screening measure for overall language abilities.

You will be asked to read one short passage. This passage will be audio-recorded. Your child will be asked to read along with your recording at a later point during the study. In addition to reading along with your voice, your child will be asked to read a short passage by themselves and be asked to read a short passage along with the audio-recording of a voice that will be unfamiliar to them.

Your child's participation will last approximately one hour and will be broken up into two separate sessions, each lasting approximately thirty sessions. In the first session, we will screen your child's hearing, administer the *Test of Word Reading Efficiency – 2nd Edition* and obtain the audio recordings of your voice. In the second session, your child will be asked to read the three different passages. You are welcome to be in the experiment room at all times and you are welcome to remove your child from participating at any time you please. There are no alternatives to the experimental procedures in this study. The only alternative is to choose for your child not to participate at all.

Possible Risks or Discomfort: Although there are no known risks to your child associated with these research procedures, it is not always possible to identify all potential risks of participating in a research study. However, the University has taken reasonable safeguards to minimize potential but unknown risks. By granting permission for your child to participate in this research project, you are not waiving any rights that you or your child may have against Valdosta State University for injury resulting from negligence of the University or its researchers.

Potential Benefits: Your child's participation in this study might benefit you and your child when considering possible reading practices. In addition, your child's participation will add to the growing base of knowledge regarding which evidence based practices tend to produce the most benefit for our children.

Parent/Guardian's Initials: _____

Agreement to Participate: The research project and my child's (or ward's) role in it have been explained to me, and my questions have been answered to my satisfaction. I grant permission for my child to participate in this study. By signing this form, I am indicating that I am either the custodial parent or legal guardian of the child. I have received a copy of this permission form.

I would like to receive a copy of the results of this study: _____ *Yes* _____ *No*

Mailing Address: _____

e-mail Address: _____

This research project has been approved by the Valdosta State University Institutional Review Board for the Protection of Human Research Participants through the date noted below:

VALDOSTA STATE UNIVERSITY
APPROVAL DATE 11/7/13
IRB # IRB-02983-2013
EXPIRATION DATE 11/6/14
INSTITUTIONAL REVIEW BOARD

_____
Printed Name of Child/Ward

_____
Printed Name of Parent/Guardian

_____
Signature of Parent/Guardian Date

_____
Signature of Person Obtaining Consent Date

APPENDIX C

Child Assent Form

Hi. My name is Alexsandria. I'm a student here at Valdosta State University. Right now, I'm trying to learn about how to help kids read better. I would like to ask you to help me by being in a study, but before I do, I want to explain what will happen if you decide to help me.

I will ask you to read some words and then read some really short stories. Sometimes you will be reading by yourself, sometimes you will be reading along with your Parent's voice, and sometimes you will be reading along with someone you don't know's voice. You won't be asked any questions about what you read. But I am going to record what you read so that I can go back and listen to it later. By being in the study, you will help me understand how to help kids read better.

Your parent will not know what you have read to me. When I tell other people about my study, I will not use your name, and no one will be able to tell who I'm talking about.

Your *[mom/dad]* says it's okay for you to be in my study. But if you don't want to be in the study, you don't have to be. What you decide won't make any difference. I won't be upset, and no one else will be upset, if you don't want to be in the study. If you want to be in the study now but change your mind later, that's okay. You can stop at any time. If there is anything you don't understand you should tell me so I can explain it to you

You can ask me questions about the study. If you have a question later that you don't think of now, you can call me or ask your parents to call me or send me an email.

Do you have any questions for me now?

Would you like to be in my study and read some short stories?

NOTES TO RESEARCHER: The child should answer "Yes" or "No." Only a definite "Yes" may be taken as assent to participate.

Name of Child: _____ **Parental Permission on File:** ☐ Yes ☐ No
(If "No," do not proceed with assent or research procedures.)

Child's Voluntary Response to Participation: ☐ Yes ☐ No

Signature of Researcher: _____ **Date:** _____

(Optional) Signature of Child: _____

APPENDIX D

Experimental Reading Passages

Grade 4:

All the Way Under: Written by Jyotsna Sreenivasan

Passage 1:

I didn't plan to tell a lie or to get into trouble. It just sort of happened. Katie, my cousin, had asked me to stay with her family for a week during the summer. Katie and I were both nine. We were going into fourth grade in the fall. We both enjoyed riding bikes, playing games, and dancing to our favorite music. For the first few days, we had a wonderful time. But all that changed when Uncle Jack decided that he would take us to the beach on his day off. "You can swim, can't you?" Uncle Jack asked as he turned into the beach parking lot the next day.

Passage 2: Pg. 2:

As soon as Uncle Jack parked the car, Katie jumped out of the back seat. She was ready to go swimming. Uncle Jack and Aunt Lisa grabbed the beach towels and umbrella and started looking for a good spot to enjoy the sun. I, on the other hand, stepped out of the car slowly. I had to come up with a plan of action. "Maybe it won't be too hard to keep from swimming," I thought. "I could always hunt for seashells, play in the sand, or chase the birds. I could even buy ice cream to eat. By that time, it would probably be time to leave."

Flat Stanley's Worldwide Adventures 2: by Sara Pennypacker

Passage 3: pg1-2:

George Lambchop was sitting at the kitchen table, going through the mail as his wife cooked breakfast. "Look at these beauties, Harriet!" he called, holding up a letter with many exotic stamps in the corner. "From Egypt!" Ever since their eldest son, Stanley, had

been flattened by a bulletin board and could now travel by mail, the Lambchop family has become keenly interested in stamps. “In a minute, dear,” Mrs. Lambchop said. “I’m just at the difficult part of flipping this French toast. A letter from Egypt you say! Why don’t you open it and read it to me.”

Grade 5:

A Growing Dilemma: by Kate Boehm Jerome

Passage 1: Pg. 4:

“Just one sec while I fix my hair,” Abby said to her friend Rita as she flashed a perky smile at her image in the bathroom mirror. “Oh, come on, Abby,” complained Rita who was standing impatiently by the door. “Your hair isn’t going to matter if they start without us!” Abby took one last glance in the glass and followed Rita out into the hall. A small group of people were gathered around a TV reporter and her cameraman. “So which one of you is Rita?” the reporter asked as she consulted her notes.

Passage 2: Pg. 15:

“Definitely,” said Abby. Grace nodded her head in agreement. Rita did like to take advantage of things. However, she was also smart enough to know when she was being scammed. “Oh, no you don’t,” she said to the group. “I’m willing to write something up, but I’m not going to do the whole thing myself. So let’s just work on it right now. The first thing we have to do is decide what we’re going to plant.” Everyone sat thinking for a moment. There were millions of plants in the world. How were they supposed to grow?

Rock Solid Clues: by Kate Boehm Jerome

Passage 3: pg. 4:

Keisha and Eric Roberts trailed behind their parents. This was the third house tour of the day, and they were getting bored. As they entered the kitchen that their father had just left, the real estate agent turned and gave them a huge smile. “Your father really likes this kitchen!” she gushed. Keisha frowned. It was very unlike her dad to comment on such a thing. Dr. John Roberts was a paleontologist- and the only things he really cared about in life were his fossils and his family. It would be very odd for him to notice the details of a kitchen.

Grade 6

Lights! Camera! Action!: By: Sara Wooten

Passage 1:

As the lights start to dim, noise from the crowd quickly turns to silence. The 2000 KAN Film Festival begins. One young filmmaker in the crowd is Alyssa Buecker from Kansas. She is 15 years old. Her movie Carrot Wars is up for the Best Film. Unlike other young filmmakers there, Alyssa knows what to expect. She has won three times before. But tonight is different. This time her film is up for the top prize. As the night goes on, awards are given for films in each category. Each winner comes up front to give a speech and to receive a trophy.

Passage 2:

Alyssa’s interest in making movies began when she was 11. During the summer, she took a class to learn how to make films. It was a good way to use her mom’s new camcorder. For a class project, Alyssa had to come up with an idea for a movie. She decided to use her pet guinea pig Hazel. “I was going to do a film about my dog.” That was not a

problem for Hazel. She will do just about anything as long as she has carrots or lettuce to eat. Alyssa made a film that was perfect for Hazel. She wrote a simple story about a guinea pig that receives a package in the mail.

Passage 3:

In Alyssa's class, she was told about a contest for filmmakers in Missouri and Kansas. It was called the KAN Film Festival. Alyssa entered her movie just for fun. She did not expect to win. This was her first film. Alyssa was surprised when she got a letter stating that she was a finalist. That summer Alyssa's film took third place in the drama-comedy division. After the success of her first movie, the Alyssa made more films with Hazel. She called her second film The Christmas Caper. It is about some lettuce that disappears.